

appearance of the dye from the urine. The mesonephros of necturus has been studied in a similar way to that of the frog and some very interesting results obtained. Nephrostomes persist in one portion of this kidney and are absent from the tubules of another portion. The contents of the peritoneal cavity gains entrance to the tubules by way of these nephrostomes so that two routes of supplying substances to the renal tubule are possible, one by way of the circulation by way of the glomerulus and the other by way of the peritoneal cavity by way of the nephrostome. Dawson used iron salts as were used by Stieglitz in the frog and he found, irrespective of whether these iron salts reach the lumina of the tubules through nephrostomes from the body cavity or through the circulation, that they are absorbed by the epithelium of the distal convoluted portions, gaining entrance to the tubule in case of intravenous injection by elimination through the glomeruli. Dawson found no evidence whatever of any secretion of iron by the epithelium of any portion of the tubule with the exception, of course, of the capsule. White and Schmitt, by micromanipulative methods, have studied the site of reabsorption in the kidney tubule of necturus and have obtained capsular and tubular fluid separately for analysis. Their studies demonstrate that sugar and chlorids are reabsorbed in the proximal convoluted tubule. Edwards again confuses the issue by giving contrary results after similar studies with necturus. He injected certain dyes both intraperitoneally and intravenously. When these dyes get into the lumina of the renal tubule through nephrostomes he did not find that they were absorbed by the cells of any portion of the tubule, but when they reach the kidney through the blood stream the proximal tubules were definitely stained. He also states that these dyes disappear from the cells of tubules simultaneously and proportionately as they disappear from the urine, a conclusion exactly similar to that which he made from his studies on the frog's kidney. Should these studies of Edwards be confirmed, they will reopen a problem which other studies were about to solve satisfactorily.

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REFERENCES

- Bowman and Heidenhain: Theories of renal secretion. In: *The Secretion of the Urine*. A. R. Cushny, Longmans, Green & Company, pp. 47-50, 1926.
- Burian: In: *Winterstein—Handbuch der Vergleich. Phys.*, Vol. 2.
- Chambers, Robert: *New Apparatus and Methods for the Dissection and Injection of Living Cells*, Anatomical Record, 24: 1-19, 1922-23.
- Cushny, A. R.: *The Secretion of the Urine*. Longmans, Green & Company, 1926.
- Dawson, A. B.: *Glomerular Versus Tubular Activity in the Mesonephros of Necturus: Elimination of Iron Salts*, Am. J. Physiol., 71: 679-87, 1925.
- Ecker: *Anatomy of the Frog*.
- Edwards, J. G.: *A Microscopic Study of the Living Kidney after the Injection of Dyes*, Am. J. Physiol.,

75: 330-38, 1926. *The Behavior of Dyes in the Kidney Tubule of Necturus*, Am. J. Physiol., 80: 179-84, 1927.

Edwards, J. G., and Marshall, E. K.: *Microscopic Observations of Living Kidney after the Injection of Phthalein*, Am. J. Physiol., 70: 489-95, 1924.

Hayman: Am. J. Physiol., 72: 184, 1925.

Ludwig: In: *Cushny's Secretion of the Urine*, pp. 50-52.

Richards, A. N.: Am. J. M. Sc., 163: 1-19, 1922.

Richards and Schmidt: *Description of Glomerular Circulation in Frog's Kidney and Observations Concerning the Action of Adrenalin and Various Other Substances upon It*, Am. J. Physiol., 71: 178-208, 1924.

Stieglitz, E. J.: *Histochemical Studies on the Mechanism of Renal Secretion*, Am. J. Anat., 29: 33-89, 1921.

Wearn and Richards: *Observations on the Composition of Glomerular Urine, with Particular Reference to the Problem of Reabsorption in the Renal Tubules*, Am. J. Physiol., 71: 209, 1924-25.

White, H. L., and Schmitt, F. O.: *The Site of Reabsorption in the Kidney Tubule of Necturus*, Am. J. Physiol., 76: 483-95, 1926.

General Medicine

Local Passive Transfer—It was shown as early as 1921¹ that hypersensitiveness could be transferred from a sensitive individual to local skins areas in a nonsensitive individual. This demonstration did more to advance our knowledge of the mechanism of human hypersensitiveness than any other single development in modern immunology.

This actual transference of the sensitiveness of one patient to a nonsensitive patient is accomplished by injecting, intradermally, the blood serum of the sensitive patient in local areas of the skin of the nonsensitive patient. In these locally restricted areas, then, it is possible to obtain reactions similar to the reactions obtained in the skin of the sensitive patient. Therefore, this technique is a satisfactory indirect method of testing infants and bedridden asthma sufferers.²

By means of this technique it was demonstrated that in the blood serum of hypersensitive individuals there are specific reacting substances that are not present in the blood serum of nonsensitive individuals.³ It has been further demonstrated that undigested proteins do pass the normal intestinal tract.⁴ With this new method of study antigens have been specifically identified,⁵ making the passive transfer technique the final conclusive method in identifying specificity of antigen.

By means of this technique we can look forward to further advances of greater practical importance. Studies are being made now, using local passive transfer technique, the results of which will be published when completed.

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REFERENCES

1. Prausnitz, C., and Kustner, H.: *Centralb. f. Bakt., Orig.*, 1921, 86, 160.
2. Matzger, M., and Kromer, S. D.: *Jour. Immunol.*, 10, 1925, 835.
3. Levine, P., and Coca, A. F.: *Jour. Immunol.*, 11, No. 6, June, 1926, 436.
4. Walzer: *Jour. Immunol.*, 11, 1925, 249.
5. Coca, A. F., and Grove, Ella: *Jour. Immunol.*, 10, 1925, 445.